# CIVIL TECH LABS

Accredited by NABL as per ISO/ IEC 17025 : 2005

# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027

Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654


To,

Assistant Executive Engineer
Yelahanka Sub Division,
BBMP Bangalore.

20th February 2015

Dear Sir,

**Sub:** Testing of Wet Mix Macadam.

As requested, tests on physical properties were carried out for the Wet Mix Macadam supplied by you, for the work of **'Improvements to drains and asphalting to main and cross road in Someshwaranagara in ward no. 04.'**

Please find the enclosed Test Reports of the above.

**Thanking You,**
**For Civil Tech Labs**

Khushboo

CIVIL TECH LABS BANGALORE

**(KHUSHBOO L.)**
**Quality Manager**

AEE

# CIVIL TECH LABS

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Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com


## TEST REPORT

TEST ON WMM MIX

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka Sub Division, BBMP |
| **Name of Work** | Improvements to drains and asphalting to main and cross road in Someshwaranagara in ward no. 04. |
| **Name of the Agency** | M/s. Technical Manager, KRIDL. |
| **Date of Testing** | 20/02/2015 |
| **Reference** | MORTH Table 400-11 |

| IS Sieve Designation (mm) | % By Weight Passing IS Sieve | Actual % By Weight Passing IS Sieve | Remarks |
|---|---|---|---|
| 53 | 100 | 100 | Satisfies Requirements |
| 45 | 95-100 | 98.2 | |
| 22.4 | 60-80 | 73.6 | |
| 11.2 | 40-60 | 52.4 | |
| 4.75 | 25-40 | 36.5 | |
| 2.36 | 15-30 | 23.7 | |
| 0.6 | 8-22 | 15.2 | |
| 0.075 | 0-8 | 7.2 | |

**Note:**

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3.Any correction invalidates this report.

4.The results are based on the test conducted on samples supplied by the client.

Lab Incharge
Civil Tech Labs

CIVIL TECH LABS BANGALORE

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Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654


To,

Assistant Executive Engineer
Yelahanka Sub Division,
BBMP Bangalore.

16th January 2015

Dear Sir,

**Sub:** Testing of Materials.

As requested, tests on physical properties were carried out for the Materials supplied by you, for the work of **'Improvements to drains and asphalting to main and cross road in Someshwaranagara in ward no. 04.'**

Please find the enclosed Test Reports of the above.

**Thanking You,**
**For Civil Tech Labs**

CIVIL TECH LABS BANGALORE

**(KHUSHBOO L.)**
**Quality Manager**

AEE

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## TEST REPORT

### TEST ON REINFORCEMENT STEEL BARS 10mm

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka Sub Division, BBMP |
| **Name of Work** | Improvements to drains and asphalting to main and cross road in Someshwaranagara in ward no. 04. |
| **Name of the Agency** | M/s. Technical Manager, KRIDL. |
| **Date of Testing** | 16/01/2015 |

| Sl.No. | Description | Result | IS 1786-1985 Min. Requirements | Remarks |
|---|---|---|---|---|
| 1 | Measured Diameter mm | 10 | 10 | Satisfactory |
| 2 | Wt/m Length (Kg/m) | 0.618 | 0.617 | Satisfactory |
| 3 | Bend & RebendTest | Pass | Should not Crack or Fracture | Satisfactory |
| 4 | Elongation (%) | 14.8 | 14.5 | Satisfactory |
| 5 | Yield Stress(N/Sq.mm) | 416 | 415 | Satisfactory |
| 6 | U T S (N/Sq.mm) | 520 | 485 | Satisfactory |

**Note:**

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Lab Incharge
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# TEST REPORT

## TEST ON COARSE AGGREGATES 40mm ↓ Graded Ref:IS:383/2386

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka Sub Division, BBMP |
| **Name of Work** | Improvements to drains and asphalting to main and cross road in Someshwaranagara in ward no. 04. |
| **Name of the Agency** | M/s. Technical Manager, KRIDL |
| **Date of Testing** | 16/01/2015 |
| **Specific Gravity** | 2.68 |
| **Water Absorption in %** | 0.27 |

| IS Sieve Designation (mm) | Sieve Analysis (% Passing IS Sieve) | Grading Requirement as per IS:383-1970 (Reaffirmed 2011) | Remarks |
|---|---|---|---|
| 80 | 100 | 100 | Satisfies the requirement |
| 40 | 97.5 | 95-100 | |
| 20 | 54.6 | 30-70 | |
| 10 | 25.7 | 10-35 | |
| 4.75 | 4.3 | 0-5 | |

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## TEST REPORT

## TEST ON CEMENT

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka Sub Division, BBMP |
| **Name of Work** | Improvements to drains and asphalting to main and cross road in Someshwaranagara in ward no. 04 |
| **Name of the Agency** | M/s. Technical Manager, KRIDL |
| **Date of Testing** | 16/01/2015 |

| Tests | Test Method As Per IS & Apparatus | | Results | | Requirements As Per IS 8112:1989 | Remarks |
|---|---|---|---|---|---|---|
| | IS Code | Method | Value | Unit | | |
| Initial Setting Time | IS-4031 (Part-5) 1988 | VICAT | 55 | min | Not Less Than 30 Minutes | Satisfies Requirement |
| Final Setting Time | IS-4031 (Part-5) 1988 | VICAT | 457 | min | Not More Than 600 Minutes | Satisfies Requirement |
| Soundness | IS-4031 (Part-3) 1988 | LE-CHATELIER | 4 | mm | Not More Than 10 mm | Satisfies Requirement |

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# TEST REPORT

## TEST ON FINE AGGREGATES Ref:IS:383/2386

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka Sub Division, BBMP |
| **Name of Work** | Improvements to drains and asphalting to main and cross road in Someshwaranagara in ward no. 04 |
| **Name of the Agency** | M/s. Technical Manager, KRIDL. |
| **Date of Testing** | 16/01/2015 |
| **Specific Gravity** | **2.56** |

| Sample | IS Sieve designation (mm) | Sieve Analysis (% Passing IS Sieve) | Grading Requirement as per IS:383-1970 | | | | Grading Zone |
|---|---|---|---|---|---|---|---|
| | | | ZONE-I | ZONE-II | ZONE-III | ZONE-IV | |
| River Sand | 10 | **100** | 100 | 100 | 100 | 100 | II |
| | 4.75 | **97.2** | 90-100 | 90-100 | 90-100 | 95-100 | |
| | 2.36 | **84.5** | 60-95 | 75-100 | 85-100 | 95-100 | |
| | 1.18 | **74.6** | 30-70 | 55-90 | 75-100 | 90-100 | |
| | 0.6 | **43.2** | 15-34 | 35-59 | 60-79 | 80-100 | |
| | 0.3 | **24.5** | 5-20 | 8-30 | 12-40 | 15-50 | |
| | 0.15 | **7.1** | 0-10 | 0-10 | 0-10 | 0-15 | |

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Lab Incharge
Civil Tech labs

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Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654


To,

Assistant Executive Engineer
Yelahanka Sub Division,
BBMP Bangalore.

06th March 2015

Dear Sir,

**Sub:** Testing of Bituminous Concrete.

As requested, tests on physical properties were carried out for the Bituminous Concrete sample supplied by you, for the work of **'Improvements to drains and asphalting to main and cross road in Someshwaranagara in ward no. 04.'**

Please find the enclosed Test Reports of the above.

**Thanking You,**
**For Civil Tech Labs**

Khushboo

CIVIL TECH LABS BANGALORE

**(KHUSHBOO L.)**
**Quality Manager**

AEE

CIVIL TECH LABS
# 5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027
Ph: 080 - 4114 2867, Email: civiltechlabs@gmail.com

# TEST REPORT

## TEST ON DETERMINATION OF BITUMEN CONTENT ON BITUMINOUS CONCRETE MIX-GRADE 2

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka Sub Division, BBMP |
| **Name of Work** | Improvements to drains and asphalting to main and cross road in Sumeshwaranagara in ward no. 04. |
| **Name of Agency** | M/s. Technical Manager, KRIDL. |
| **Date of Testing** | 06/03/2015 |

A)

| Sl. No. | Test | Test Method | Technical Reference |
|---|---|---|---|
| 1 | Extraction of mineral aggregate | **Test Method A (Centrifuge Method)** | **ASTM: D2172/ D2172M-11** |
| 2 | Determination of amount of mineral matter/fines in the extract | **Ashing Method** | |

B)

**Specification: As Per MORTH (4th Revision) Table 500-18, Bitumen Content for BC Grade-2 is 5% to 7%**

| Sl. No. | Description | Values |
|---|---|---|
| 1 | Weight of bituminous mixture before extraction test, $W_1$ g | 2000.00 |
| 2 | Weight of mineral aggregate obtained from centrifuge extractor, $W_2$ g | 1872.50 |
| 3 | Weight of mineral matter in the total volume of extract (by ashing), $W_3$ g | 13.51 |
| 4 | Total weight of aggregate in the bituminous mixture, $W_4$ g = ($W_2$ + $W_3$) g | 1886.01 |
| 5 | Total weight of Bitumen extracted from the mixture, $W_5$ g = ($W_1$-$W_4$) g | 113.99 |
| 6 | Bitumen content in %, ($W_5/W_1$) % | 5.70 |

| | |
|---|---|
| **Remarks** | **Satisfies the requirement.** |

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AEE

Lab Incharge
Civil Tech Labs

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# TEST REPORT

## GRADATION TEST ON BITUMINOUS CONCRETE MIX GRADE - 2

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka Sub Division, BBMP |
| **Name of Work** | Improvements to drains and asphalting to main and cross road in Someshwaranagara in ward no. 04. |
| **Name of Agency** | M/s. Technical Manager, KRIDL. |
| **Date of Testing** | 06/03/2015 |
| **Technical Reference** | IS : 2386(Part I)-1963 (Reaffirmed 2011) |

| | Sample-1 | | |
|---|---|---|---|
| **IS Sieve Designation (mm)** | **% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-18 for BC Grade-2** | **Actual % By Weight Passing IS Sieve** | **Remarks** |
| 19 | 100 | **100** | **Satisfies the requirements** |
| 13.2 | 79-100 | **96.8** | |
| 9.5 | 70-88 | **84.6** | |
| 4.75 | 53-71 | **64.5** | |
| 2.36 | 42-58 | **52.6** | |
| 1.18 | 34-48 | **36.5** | |
| 0.6 | 26-38 | **31.2** | |
| 0.3 | 18-28 | **22.8** | |
| 0.15 | 12-20 | **15.4** | |
| 0.075 | 4-10 | **8.2** | |

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T-2654


To,

Assistant Executive Engineer
Yelahanka Sub Division,
BBMP Bangalore.

26th February 2015

Dear Sir,

**Sub:** Improvements to drains and asphalting to main and cross road in Someshwaranagara in ward no. 04.
Testing of cubes – Reg.

As requested the 28th day Compressive Strength Test of Cubes was carried out for the above work for the samples supplied by you.

Please find the enclosed Test Report of the above.

Thanking you,

**For Civil Tech Labs,**

Khushboo

CIVIL TECH LABS BANGALORE

**(KHUSHBOO L.)**
**Quality Manager**

AEE

# CIVIL TECH LABS

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## TEST REPORT

### COMPRESSIVE STRENGTH TEST ON CONCRETE CUBES

| | |
|---|---|
| **Name & Address of the Customer** | AEE, Yelahanka Sub Division, BBMP |
| **Name of Work** | Improvements to drains and asphalting to main and cross road in Someshwaranagara in ward no 04. |
| **Name of Agency** | M/s. Technical Manager, KRIDL |
| **Grade of Concrete** | M-20 |
| **No. of cubes tested** | 3 |
| **Dimension of Specimen** | 150mmx150mmx150mm |
| **Cross Sectional Area** | 22500 $mm^2$ |
| **Technical Reference** | IS: 516-1959 (Reaffirmed 2013) |

| Sl. No. | Identification | Date of Casting | Date of Testing | Age at test (Days) | Weight (Kg) | Failure Load (KN) | Compressive Strength ($N/mm^2$) | Avg Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|
| 1 | CC-Work | 29/01/2015 | 26/02/2015 | 28 | 8.21 | 485 | **21.56** | **21.19** |
| 2 | | | | | 8.19 | 475 | **21.11** | |
| 3 | | | | | 8.18 | 470 | **20.89** | |

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